BRUHATH BENGALURU MAHANAGARA PALIKE

Yelahanka Division, Yelahanka Zone

Executive Engineeer
Yelahanka Division
B.B.M.P. Bengaluru - 64

No:EE/YNK-D/E-PMT/03/2020-21 Dated: 24-07-2020

APPROVED TENDER SCHEDULE –'B'

Item 05

Name of Work :-Providing Street Lights in ward no 04 Yelahanka Satellite Tow

Sl	Description	Unit	Approved Qty	Rate quoted by the contractor approved rates Sri.MADHUSUDHAN A N (SURAKSHA ELECTRICALS)	
				Rate	Rate in Words
1	Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3	Cum	256.73	220.00	Two Hundred Twenty Only
2	KSRRB M2100-10: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.89 cum and fine aggregates @ 0.46 cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM of machinery, curing, formworks, scaffolding and centering complete as per specifications	Cum	36.05	5693.00	Five Thousand Six Hundred NinetyThree Only
3	Construction of Median and island with Soil taken from Borrow Areas. KSRRB M400-19. Construction of Median and island with Soil taken from Borrow Areas. Construction of Median and island above road level with approved material deposited from borrowpits, spread, sloped and compacted as per Clause 400.7 complete as per specifications. MORTH Specification No. 407	Cum	193.20	232.62	Two Hundred ThirtyTwo Paise SixtyTwo Only

4	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete	Nos	3578.00	454.10	Four Hundred FiftyFour Paise Ten Only
5	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	563.50	89.00	EightyNine Only
6	Providing and laying in position plain/reainforced cement concrete M20 for sub structure/ Superstructure works, with cement @ 320 kgs, 20 mm & down size graded granite metal coarse aggregate @ 0.69 cum and fine aggregates @ 0.46 cum machine mixed with superplasticisers @ 3ltrs confirming to IS 9103-2008, concrete laid in layers, well compacted and providing weep holes wherever necessary with necessary scaffoldingf, formwork etc., including cost of labour, HOM curing etc., complete	Cum	69.30	5541.00	Five Thousand Five Hundred FourtyOne Only
7	KSRRB M2200-6. Providing TMT steel reinforcement Fe500 for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH specification No 1600 & 2200	Tonne	2.42	75943.00	SeventyFive Thousand Nine Hundred FourtyThree Only

8	Fabricating, Supplying and errection of decorative bent type Conical Street light pole with hot dip Galvanized with BSEN 10025 grade S 355 JO Steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet for MCBs as per IS Specifications.suitable to withstand the wind speed. The total height of the pole 9 mtrs. The pole should have 2 nos of pole esthetically bent either side. The dimensions of the pole bottom 178 mm,at 9 mtrs height 70 mm 3mm thick and one number of 3 mtr height perforated pole having colour changing LED Fixture, inside as suitable to the picture. The base plate size of 350mm x 350mm x 18 mm and the pole shall be galvanized with not less than 65 micron etc and finally finished with paint as required with two different colour. (With out foundation). As per the enclosed pictures and as per IS standards. As per attached Drawing	Nos	55.00	97125.00	NinetySeven Thousand One Hundred TwentyFive Only
9	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended.7 meters - Top 70mm and bottom 130mm dia	Nos	50.00	11476.50	Eleven Thousand Four Hundred SeventySix Paise Fifty Only

10	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Conical pole with BSEN 10025 grade S355JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc.,(excluding foundation) as per drawing appended.4 meters - Top 75mm and bottom 115 mm dia	Nos	190.00	6686.40	Six Thousand Six Hundred EightySix Paise Fourty Only
11	Fabricating, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended.3 meters - Top 70mm and bottom 130mm dia	Nos	40.00	5628.00	Five Thousand Six Hundred TwentyEight Only
12	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete.Single Arm Bracket with 1500mm Standard 40/50MM dia	Nos	50.00	2217.60	Two Thousand Two Hundred Seventeen Paise Sixty Only
13	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete.Single Arm Bracket with 1000mm Standard 40/50MM dia	Nos	190.00	1773.45	One Thousand Seven Hundred SeventyThree Paise FourtyFive Only

4	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation.Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED efficiency>130lm/w.	Nos	140.00	10762.50	Ten Thousand Seven Hundred SixtyTwo Paise Fifty Only
15	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherencė with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with	Nos	50.00	9660.00	Nine Thousand Six Hundred Sixty Only

6	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with	Nos	190.00	3528.00	Three Thousand Five Hundred TwentyEight Only
17	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/ clear glass material, delivering superior light output.Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB . LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified	Nos	40.00	6720.00	Six Thousand Seven Hundred Twenty Only

18	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 25 sqmm	Mtr	3000.00	189.00	One Hundred EightyNine Only
19	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 35 sqmm	Mtr	750.00	236.25	Two Hundred ThirtySix Paise TwentyFive Only
20	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required In existing trench/duct. 25 sqmm to 75 sqmm	Mtr	3750.00	16.28	Sixteen Paise TwentyEight Only
21	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete.(As per Civil SR KSRB I-2, P. 7)In soil (ordinary)	Mtr	12700.00	79.80	SeventyNine Paise Eighty Only
22	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc.,complete.(As per Civil SR KSRB I-2, P. 7)Asphalt cutting	Mtr	200.00	118.65	One Hundred Eighteen Paise SixtyFive Only
23	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments 1.5 sqmm	Mtr	5820.00	21.53	TwentyOne Paise FiftyThree Only
24	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments 10 sqmm	Mtr	50.00	120.75	One Hundred Twenty Paise SeventyFive Only
25	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than .25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.40mm	Mtr	120.00	351.75	Three Hundred FiftyOne Paise SeventyFive Only
26	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.35Sqmm	Nos	20.00	367.50	Three Hundred SixtySeven Paise Fifty Only

27	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.25 sqmm Long Barrel	Nos	600.00	21.00	TwentyOne Only
28	Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode.The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts.	Nos	3.00	4357.50	Four Thousand Three Hundred FiftySeven Paise Fifty Only
29	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.600x600x3mm Copper plate	Nos	3.00	7245.00	Seven Thousand Two Hundred FourtyFive Only
30	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc.,and painted with 2 coats of red oxide and then two coats of approved paint.40x40x6mm	Mtr	135.00	267.75	Two Hundred SixtySeven Paise SeventyFive Only
31	Fabricating supplying and mounting MS box made out SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete16SWG	Sqm	330000.00	0.37	Paise ThirtySeven Only
32	Supplying and fixing Moulded Case Circuit Breaker (MCCB)over the existing wood/panel board using necessary screws,bolts, nuts, necessary phase separators, handle and wiring complete. Protection of Overload and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS-13947. (Icu = Ics)100Amps 25kA.	Nos	11.00	6720.00	Six Thousand Seven Hundred Twenty Only

33	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.	Nos	420.00	183.75	One Hundred EightyThree Paise SeventyFive Only
34	Supplying and running of GI/Copper strips for grounding connections, using necessary fixing materials as required.25x3mm Copper strip	Mtr	250.00	530.25	Five Hundred Thirty Paise TwentyFive Only
35	Supplying & fixing of retrofit type - LED bulb.....W with OPAL acrylic diffuser comprising of LED source with CCT 6500 degree K, CRI> 70%. efficacy >80 lumen per watt,life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The LED are driven by HF electronic driver integrated in the system, with PF > 0.95, power loss should < 5% of lamp wattage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%,Life as per LM 79. The operating input voltage should be between 130 to 275 volts. BIS Approved and Tested by ABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition 18W, 6500K	Nos	55.00	267.75	Two Hundred SixtySeven Paise SeventyFive Only
36	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.63Amps	Nos	30.00	238.35	Two Hundred ThirtyEight Paise ThirtyFive Only
37	Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure 7) Transformers: Customized	Nos	10.00	54075.00	FiftyFour Thousand SeventyFive Only

	Laying of UG Cables by trenchless technology by adopting horizontal boring & Drawing of cable including preparation at site With HDPE Pipe i) Normal soil 5/6" bore size .	Mtr	200.00	890.40	Eight Hundred Ninety Paise Fourty Only
39	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16 sqmm	Mtr	6500.00	157.00	One Hundred FiftySeven Only
40	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.6 sqmm to 16 sqmm In existing trench/duct.6 sqmm to 16 sqmm	Mtr	6500.00	12.47	Twelve Paise FourtySeven Only
41	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia	No	6.00	3149.69	Three Thousand One Hundred FourtyNine Paise SixtyNine Only
42	Supplying and running of GI/Copper strips for grounding connections, using necessary. fixing materials as required.25x3mm GI strip	Mtr	40.00	78.75	SeventyEight Paise SeventyFive Only
43	Providing Rcc Pole pedstal of Size 0.5x0.5x1.6 Mtrs Including digging of pit, tor steel, anchoring bolts nuts ,templates ,Centring,1;4;8base concrete,1;2;4pedestal concrete and etc coplete as per the data sheet enclosed	Nos	50.00	5618.00	Five Thousand Six Hundred Eighteen Only
44	Providing Rcc Pole pedstal of Size 0.35x0.35x1.3 Mtrs Including digging of pit, tor steel, anchoring bolts nuts ,templates ,Centring,1;4;8 base concrete,1;2;4pedestal concrete and etc coplete as per the data sheet enclosed	Nos	230.00	2898.00	Two Thousand Eight Hundred NinetyEight Only

	Supply, commissioning of out door garden speaker fitted with wide response and water resistant polypropylene speaker components and strong aluminium alloy housing permits various outdoor application omni directional speakers IP 55 norms 40W/100 volt with taping of 40/20/10/5watts 88 db 160 Hz-16KHz Dimensions DIA 185mm x H765 mmfrequency response Preferable. Make : Ahuja/Eq	Nos	181.00	18522.00	Eighteen Thousand Five Hundred TwentyTwo Only
46	Supply, installation, testing and commissioning of 480 to 600 watt amplifier with large air cooled/forced air cooled heat sink with 3 x line level inputs and 1 x 100 volt input to loop another amp output line ground lift switch to reduce the ground loop hum with 100v/70 volt/ impedence out put Frequency resposne of 50 htz to 15 khtz SN ratio 60 db Power consumption 1200VA AC. Make : Audiotrak/Ahuja	Nos	8.00	76734.00	SeventySix Thousand Seven Hundred ThirtyFour Only
47	Supply, installation, testing and commissioning of FM radio with Frequency range of 70 Mhz to 108 Mhz PLL based auto tuning sysetm with aux out with out door antenna consumption preferable. Make : Custom	Nos	8.00	2268.00	Two Thousand Two Hundred SixtyEight Only
48	Supply, installation, testing and commissioning of water proof audio rack made of Powder coated MS lockable with bottem ventilated with removable mesh type cover with power strip and for out door use preferable. Make : Custom	Nos	8.00	67473.00	SixtySeven Thousand Four Hundred SeventyThree Only
49	Supply, installation, testing and commissioning of Timer module with 8+8 programmable timer with realtime clock to fix the switching on and off time of BGM/PA system Make : Custom	Nos	8.00	8694.00	Eight Thousand Six Hundred NinetyFour Only
50	Supply, installation, testing and commissioning of hand held wired mic with wind shield with single channel mic preamp Frequency response of 55 htz to 16000 htz with 2,5 mvolt out put. Make : Ahuja/Eq	Nos	4.00	8883.00	Eight Thousand Eight Hundred EightyThree Only
51	Supply, installation, testing and commissioning of Speaker mounting hardware with mounting templets to be grouted in to the concrete with welded bolts as required to fix the garden speaker	Nos	186.00	2362.00	Two Thousand Three Hundred SixtyTwo Only

Supply, installation, testing and commissioning of 4 core 2.5 sq mm armoured cable preferable. Make : Custom	mtr	10200.00	311.85	Three Hundred Eleven Paise EightyFive Only

Signature of the Contractor

Executive Engineer,
Yelahanka Division,
BBMP, Bengaluru-64.